Royd 3/17/93 from PD



Morenci Linc. 4521 State Hwy. 666, Morenci, Arizona 85540-9795 • (602) 865-4521

SFUND RECORDS CTR 2349215

January 18, 1993

Arizona Department of Environmental Quality Office of Water Quality Water Pollution Compliance Unit 3033 North Central Ave. (at Earll) Phoenix, Arizona 85012

Dear Sirs:

Re: Groundwater Quality Protection Permit No. G-0001-06 Fourth Quarter 1992 Sampling Report

This constitutes the quarterly groundwater sampling report required by Groundwater Quality Protection Permit No. G-0001-06, as specified on page 11 of that permit. Included are Self-Monitoring Report forms, Groundwater Sampling Procedures Documentation forms and tables containing monthly sampling results, quarterly sampling results, and 5-point averages.

Monthly-required constituent analyses for October, November and December 1992 are found in Tables 1A, 1B, and 1C. Quarterly required constituent analyses for October 1992 are found in Tables 2A, 2B, and 2C.

Permit G-0001-06 specifies that compliance shall be based on 5-point running averages. Accordingly, we have enclosed 5-point monthly running averages for June 1992 through October 1992, July 1992 through November 1992, and August 1992 through December 1992. These are found in Tables 3A, 3B, and 3C. Five-point quarterly-required running averages are provided for October 1991 through October 1992. These are found in Tables 4A, 4B, and 4C. For purposes of computing averages when values were not detectable, one-half the EPA method detection limit was used for the constituent concentration. This substitution was discussed in Supplement 4 to our application for the permit.

Weekly monitoring for fluids in the leak detection system installed in the Central SX/EW raffinate and plant feed ponds continues. Please contact me if you have any questions.

Very truly yours,

T. L. Cogut

Environmental Services

Supervisor

TLC:km (F7) Enclosures

cc: J. D. Worsham - w/encls.

T. R. Snider - w/o encls.

A. J. Broderick - "

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Invnum: 100193
Permit: G-0001-06

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Point : A00085 Name : Well CC-7

Latitude: 33°3'25.09" Longitude: 109°18'52.61"

Township: 04S Section: 25 Range : 29E Quarter : BDD

Phelps Dodge Morenci, Inc.

Timothy R. Snider, Branch Manager Quarterly Reporting - Monthly Monitoring

P. O. Box 187

Morenci, AZ. 85540

						PERMIT LIMIT -		PERMIT LIMIT
PH						Reserved	SU	No Limit
SAMPLE DATE	- ANALYSIS DATE -	- STORET -	ME	THOD -	— LAB ID —	CONCENTRATION REPO	RTED	LOADING REPORTED
10/06/92	10/20/92	00400	EPA	150.1	1186	7.0000	SU	XXXXXXXXXXXXXX
11/02/92	11/20/92	00400	EPA	150.1	1186	7.0000	SU	XXXXXXXXXXXXXX
12/01/92	12/14/92	00400	EPA	150.1	1186	7.1000	SU	XXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
BICARBONATE						Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOO -	- LAB ID -	CONCENTRATION REPO	RTED	LOADING REPORTED
10/06/92	10/20/92	00440	EPA	305.1	1186	122.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00440	EPA	305.1	1186	117.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00440	EPA	305.1	1186	121.0000	MG/L	XXXXXXXXXXXXX
			v			PERMIT LIMIT -		PERMIT LIMIT
OTAL CALCI	UM					Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	THOD	- LAB ID	CONCENTRATION REPO	RTED	LOADING REPORTED
10/06/92	10/20/92	00916	EPA	215.1	1186	410.0000	MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	00916	EPA	215.1	1186	361.0000	MG/L	XXXXXXXXXXXXX
12/01/92	12/14/92	00916	EPA	215.1	1186	378.0000	MG/L	XXXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Point: A00085 Name: Well CC-7

Invnum: 100193
Permit: G-0001-06

						PERMIT LIMIT -		PERMIT LIMIT
COTAL MAGNE	ESIUM					Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOD	LAB ID	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00927	EPA	242.1	1186	66.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00927	EPA	242.1	1186	65.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00927	EPA	242.1	1186	69.0000	MG/L	XXXXXXXXXXXXXX
						PERHIT LINIT -		PERMIT LIMIT
BODIUM		•				Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	THOD -	— LAB ID —	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00929	EPA	273.1	1186	32.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00929	EPA	273.1	1186	34.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00929	EPA	273.1	1186	31.0000	MG/L	XXXXXXXXXXXXXX
					· ··	PERMIT LIMIT -		PERMIT LIMIT
COTAL POTAS	BSIUM			•		Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	THOD -	- LAB ID -	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00937	EPA	258.1	1186	10.1000	MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	00937	EPA	258.1	1186	10.5000	MG/L	XXXXXXXXXXXXX
12/01/92	12/14/92	00937	EPA	258.1	1186	10.7000	MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
TOTAL CHLOR	RIDE					Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	THOD	- LAB ID	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00941	EPA	325.1	1186	153.0000	MG/L	XXXXXXXXXXXXXXX
11/02/92	11/20/92	00941	EPA	325.1	1186	146.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00941	EPA	325.1	1186	148.0000	MG/L	XXXXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Permit: G-0001-06 : Well CC-7 Point : A00085 Name

roine	100000					PERMIT LIMIT -		PERMIT LIMIT -
BULFATE						Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOO	LAB ID	CONCENTRATION REP	ORTED -	LOADING REPORTED
10/06/92	10/20/92	00945	EPA	375.3	1186	c975.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00945	EPA	375.3	1186	930.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00945	EPA	375.3	1186	925.0000 5	MG/L	XXXXXXXXXXXXXX
					<u>-</u>	PERMIT LIMIT -		PERMIT LIMIT
TOTAL IRON						Reserved	MG/L	No Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET	——— ма	THOD	LAB ID	CONCENTRATION REP	ORTED	LOADING REPORTED
10/06/92	10/20/92	01045	EPA	236.1	1186	-0.0300	MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	01045	EPA	236.1	1186	-0.0300	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	01045	EPA	236.1	1186	-0.0300	MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT -	 	PERMIT LIMIT
TOTAL DISSO	LVED SOLIDS					Reserved	MG/L	No Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET	и	ETHOD	- LAB ID	CONCENTRATION REP	PORTED -	LOADING REPORTED
10/06/92	10/20/92	70295	EPA	160.1	1186	1870.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	70295	EPA ·	160.1	1186	1740.0000	MG/L	XXXXXXXXXXXXXXXX
12/01/92	12/14/92	70295	EPA	160.1	1186	1790.0000	MG/L	XXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Demo 5 1 Anich DATE 1/19/93

Invnum: 100193

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Invnum: 100193

Point

: A00085

Name

: Well CC-7

Latitude: 33°3'25.09" Longitude: 109°18'52.61"

Permit: G-0001-06

Township: 04S

Range

Section: 25

: 29E Quarter : BDD

Phelps Dodge Morenci, Inc.

Timothy R. Snider,

Branch Manager

Quarterly Reporting - Quarterly Monitoring

P. O. Box 187

Morenci, AZ. 85540

					PERMIT LIMIT	PERMIT LIMIT
IDE		-			1.4000 MG/L	No Limit
— ANALYSIS DATE —	STORET	ME	THOD	— LAB 1D —	CONCENTRATION REPORTED	LOADING REPORTED
10/20/92	00951	EPA	340.1	1186	0.5200 MG/L	XXXXXXXXXXXXX
					PERMIT LIMIT	PERMIT LIMIT
IC					0.5000 MG/L	No Limit
- ANALYSIS DATE	- STORET	ME	THOD	- LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/20/92	01002	EPA	206.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXX
<u> </u>					PERMIT LIMIT	PERMIT LIMIT
M	•				1.0000 MG/L	No Limit
- ANALYSIS DATE -	STORET	ME	THOD	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/20/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXX
					PERMIT LIMIT	PERMIT LIMIT
UM					0.0100 MG/L	No Limit
- ANALYSIS DATE -	- STORET -	NE	THOD	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/20/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXX
					PERMIT LIMIT	PERMIT LIMIT
IUM		•		•	0.0500 MG/L	No Limit
— ANALYSIS DATE —	STORET	ME	THOD —	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/20/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXX
	ANALYSIS DATE 10/20/92 IC ANALYSIS DATE 10/20/92 ANALYSIS DATE 10/20/92 UM ANALYSIS DATE 10/20/92 IUM ANALYSIS DATE ANALYSIS DATE 10/20/92	- ANALYSIS DATE - STORET - 10/20/92 00951 ICC - ANALYSIS DATE - STORET - 10/20/92 01002 - ANALYSIS DATE - STORET - 10/20/92 01007 UM - ANALYSIS DATE - STORET - 10/20/92 01027 IUM - ANALYSIS DATE - STORET - 10/20/92 01027	- ANALYSIS DATE - STORET - ME 10/20/92 00951 EPA ICC - ANALYSIS DATE - STORET - ME 10/20/92 01002 EPA - ANALYSIS DATE - STORET - ME 10/20/92 01007 EPA UM - ANALYSIS DATE - STORET - NE 10/20/92 01027 EPA	- ANALYSIS DATE - STORET - METHOD - 340.1 ICC - ANALYSIS DATE - STORET - METHOD - 10/20/92	- ANALYSIS DATE - STORET - METHOD - LAB ID - 10/20/92 00951 EPA 340.1 1186 ICC - ANALYSIS DATE - STORET - METHOD - LAB ID - 10/20/92 01002 EPA 206.2 1186 - ANALYSIS DATE - STORET - METHOD - LAB ID - 10/20/92 01007 EPA 208.1 1186 DM - ANALYSIS DATE - STORET - METHOD - LAB ID - 10/20/92 01027 EPA 213.1 1186 IUM - ANALYSIS DATE - STORET - METHOD - LAB ID - 10/20/92 01027 EPA 213.1 1186	1.4000 MG/L

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY Quarterly Reporting - Quarterly Monitoring

-	PHELPS DODGE				EEK		Invnum: 100193
Point :	A00085	Name	: well	CC-7		PERMIT LIMIT	Permit: G-0001-0
TOTAL COPPE	R					Reserved MG/L	No Limit
	— ANALYSIS DATE —	STORET	ME	THOD -	- LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01042	EPA	220.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXX
			·			PERMIT LIMIT	PERMIT LIMIT
TOTAL LEAD						0.0500 MG/L ³	No Limit
SAMPLE DATE -	- ANALYSIS DATE -	STORET	ME	THOD	- LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01051	EPA	239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL MANGA	nese	•				Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	ETHOD -	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01055	EPA	243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL SILVE	R				•	0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE -	STORET	ME	ETHOD	— LAB ID —	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01077	EPA	272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
				 		PERMIT LIMIT	PERMIT LIMIT
TOTAL SELEN	IUM					0.01 <u>00 MG/L</u>	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	ETHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01147	EPA	270.2	1186	0.0050 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL PHENO	LS					Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE -	STORET	ME	ETHOD —	- LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	46000	EPA	420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL MERCU	RY					0.0020 MG/L	No Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET	ME	ТНОО ———	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	71900	EPA	245.1	1186	0.0010 MG/L	XXXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Quarterly Monitoring

	PHELPS DODGE A00085		INC - CH	ASE CR	•	_		Invnum: 100193 Permit: G-0001-06
TOTAL ZINC		CZODEZ —	MCT	400	- LAB ID	PERMIT LIMIT - Reserved CONCENTRATION REP	•	NO Limit LOADING REPORTED
10/06/92	— ANALYSIS DATE — 10/20/92	STORET 82062	EPA	289.1	— LAB ID 1186	0.0300	MG/L	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
NITRATE						PERMIT LIMIT - 10.0000	MG/L	PERMIT LIMIT NO Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET -	MET	HOD -	— LAB ID —	CONCENTRATION REP	ORTED -	LOADING REPORTED
10/06/92	10/20/92	00620	EPA	353.2	1186	1.6000	MG/L	XXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

sweeted find

DATE 1/19/93

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Quarterly Monitoring

-	PHELPS DOD A00085	OGE MORENCI Name	INC - CH	ASE CR	-			Invnum: 100193 Permit: G-0001-06
TOTAL ZINC	ANALYSIS DAT			TH00	— LAB ID —		PORTED	No Limit LOADING REPORTED
10/06/92 NITRATE	10/20/92	82062	EPA	289.1	1186	0.0300		PERMIT LIMIT ———— No Limit
SAMPLE DATE — 10/06/92	—— ANALYSIS DAT 10/20/92		EPA	353.2	— LAB ID — 1186	CONCENTRATION RE	PORTED	LOADING REPORTED

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

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DATE 1/19/93

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit: G-0001-06

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK Invnum: 100193

Point : A00086 Name : Well CC-8

Latitude: 33°3'42.10" Longitude: 109°19'19.16"

Township: 04S Range : 29E Section : 25 Quarter : BBB

Phelps Dodge Morenci, Inc.

Timothy R. Snider, Branch Manager Quarterly Reporting - Monthly Monitoring

P. O. Box 187

Morenci, AZ. 85540

				·		PERMIT LIMIT -		PERMIT LIMIT
PH						Reserved S	SU	No Limit
SAMPLE DATE -	- ANALYSIS DATE -	STORET	MI	ЕТНОО	— LAB ID —	CONCENTRATION REPOR	TED	LOADING REPORTED
10/06/92	10/20/92	00400	EPA	150.1	1186	7.3000	รช	XXXXXXXXXXXXXX
11/02/92	11/20/92	00400	EPA	150.1	1186	7.3000	บอ	XXXXXXXXXXXXXX
12/01/92	12/14/92	00400	EPA	150.1	1186	7.4000	บร	XXXXXXXXXXXXXX
			·	·		PERMIT LIMIT -		PERMIT LIMIT
BICARBONATE				•		Reserved 1	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	MI	THOD	LAB ID	CONCENTRATION REPOR	TED -	LOADING REPORTED
10/06/92	10/20/92	00440	EPA	305.1	1186	108.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00440	EPA	305.1	1186	108.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00440	EPA	305.1	1186	96.5000	MG/L	XXXXXXXXXXXXXX
•						PERMIT LIMIT		PERMIT LIMIT
TOTAL CALCI	UM					Reserved 1	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	MI	ETHOD	— LAB ID —	CONCENTRATION REPOR	TED	LOADING REPORTED
10/06/92	10/20/92	00916	EPA	215.1	1186	280.0000 P	MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	00916	EPA	215.1	1186	249.0000 N	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00916	EPA	215.1	1186	250.0000 N	MG/L	XXXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Invnum: 100193 Permit: G-0001-06 : Well CC-8 Point : A00086 Name

Point .	AUUUUU	Manie	. MCII	CC 0				TCIMIC. G OUOI (
	A T TWY					PERMIT LIMIT -	MC /T	PERMIT LIMIT
TOTAL MAGNE	BIUM					Reserved	MG/L	No Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET	MET	HOD -	- LAB ID -	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00927	EPA	242.1	1186	61.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00927	EPA	242.1	1186	62.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00927	EPA	242.1	1186	62.0000	MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
BODIUM						Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE -	STORET	ME1	HOD	— LAB ID —	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00929	EPA	273.1	1186	77.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00929	EPA	273.1	1186	87.0000	MG/L	XXXXXXXXXXXXX
12/01/92	12/14/92	00929	EPA	273.1	1186	79.0000	MG/L	XXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
COTAL POTAS	SIUM					Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE -	STORET	MET	THOD	- LAB ID -	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00937	EPA	258.1	1186	8.5000	MG/L	XXXXXXXXXXXXXXX
11/02/92	11/20/92	00937	EPA	258.1	1186	9.1000	MG/L	XXXXXXXXXXXXX
12/01/92	12/14/92	00937	EPA	258.1	1186	8.8000	MG/L	XXXXXXXXXXXXXX
		·				PERMIT LIMIT -		PERMIT LIMIT
TOTAL CHLOR	RIDE					Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE -	- STORET -	MET	HOD	- LAB ID -	CONCENTRATION REPO	ORTED -	LOADING REPORTED
10/06/92	10/20/92	00941	EPA	325.1	1186	-296.0000 ³ ⋅	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00941	EPA	325.1	1186	c 308.0000 ³	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	. 00941	EPA	325.1	1186	325.0000 0 -	MG/L	XXXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Monthly Monitoring

_	PHELPS DODGE A00086	MORENCI Name	INC - C : Well		EEK		Invnum: 100193 Permit: G-0001-06
SULFATE						Reserved MG/L	
SAMPLE DATE	- ANALYSIS DATE -	STORET	ME	THOD -	- LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	00945	EPA	375.3	1186	t 560.0000 3 MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	00945	EPA	375.3	1186	510.0000 → MG/L	XXXXXXXXXXXXX
12/01/92	12/14/92	00945	EPA	375.3	1186	485.0000 g MG/L	XXXXXXXXXXXXXX
	<u> </u>					PERMIT LIMIT	PERMIT LIMIT
TOTAL IRON						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE -	STORET	ME	THOD	- LAB ID	CONCENTRATION REPORTED -	LOADING REPORTED
10/06/92	10/20/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXX
	<u> </u>					PERMIT LIMIT	PERMIT LIMIT
TOTAL DISSO	LVED SOLIDS					Reserved MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	MI	THOD	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	70295	EPA	160.1	1186	1510.0000 MG/L	XXXXXXXXXXXXX
11/02/92	11/20/92	70295	EPA	160.1	1186	1370.0000 MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	70295	EPA	160.1	1186	1380.0000 MG/L	XXXXXXXXXXXXX
• •	- •						

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Demot A frid

DATE 1/19/93

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Invnum: 100193

Point : A00086

Name

: Well CC-8

Latitude: 33°3'42.10" Longitude: 109°19'19.16"

Permit: G-0001-06

Township: 04S Section: 25

Range

: 29E

Quarter : BBB

Phelps Dodge Morenci, Inc.

Timothy R. Snider,

Branch Manager

Quarterly Reporting - Quarterly Monitoring

P. O. Box 187

Morenci, AZ. 85540

						PERMIT LIMIT	PERMIT LIMIT
TOTAL FLUOR	IDE					1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	00951	EPA	340.1	1186	0.5600 MG/L	XXXXXXXXXXXXXX
						PERNIT LIMIT	PERMIT LIMIT
TOTAL ARSEN	IC					0.5000 MG/L	No Limit
SAMPLE DATE -	- ANALYSIS DATE -	STORET	ME	THOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01002	EPA	206.2	1186	0.0030 MG/L	XXXXXXXXXXXXXXX
	,,					PERMIT LIMIT	PERMIT LIMIT
TOTAL BARIU	M					1.0000 MG/L	No Limit
	— ANALYSIS DATE —	STORET	ME	THOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL CADMI	UM .					0.0100 MG/L	No Limit
•	ANALYSIS DATE	STORET	ME	THOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXX
	,,					PERMIT LIMIT	PERMIT LIMIT
TOTAL CHROM	IUM					0.0500 MG/L	No Limit
	ANALYSIS DATE	STORET	ME	THOD	— LAB ID —	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK Invnum: 100193 Permit: G-0001-06 : Well CC-8 : A00086 Name Point PERMIT LIMIT -PERMIT LIMIT -Reserved MG/L No Limit TOTAL COPPER CONCENTRATION REPORTED LOADING REPORTED LAB ID SAMPLE DATE -ANALYSIS DATE -STORET METHOD ' XXXXXXXXXXXXX MG/L 01042 **EPA** 220.1 1186 -0.0100 10/20/92 10/06/92 PERMIT LIMIT PERMIT LIMIT -0.0500 MG/L No Limit TOTAL LEAD LOADING REPORTED CONCENTRATION REPORTED LAB ID SAMPLE DATE -ANALYSIS DATE -STORET ' METHOD . XXXXXXXXXXXXX MG/L 01051 **EPA** 239.2 1186 -0.0020 10/06/92 10/20/92 PERMIT LIMIT PERMIT LIMIT -Reserved MG/L No Limit TOTAL MANGANESE CONCENTRATION REPORTED LOADING REPORTED SAMPLE DATE -STORET METHOD LAB ID ANALYSIS DATE . XXXXXXXXXXXXX MG/L 243.1 1186 -0.0100 10/20/92 01055 **EPA** 10/06/92 PERMIT LIMIT -PERMIT LIMIT . No Limit 0.0500 MG/L TOTAL SILVER LOADING REPORTED CONCENTRATION REPORTED LAB ID SAMPLE DATE -ANALYSIS DATE . STORET METHOD MG/L XXXXXXXXXXXXX -0.0020 01077 **EPA** 272.1 1186 10/06/92 10/20/92 - PERMIT LIMIT PERMIT LIMIT -No Limit 0.0100 MG/L TOTAL SELENIUM LOADING REPORTED CONCENTRATION REPORTED METHOD LAB ID SAMPLE DATE -ANALYSIS DATE STORET XXXXXXXXXXXXXX 270.2 1186 0.0030 MG/L 10/06/92 10/20/92 01147 **EPA** - PERMIT LIMIT . PERMIT LIMIT -Reserved MG/L No Limit TOTAL PHENOLS LOADING RÉPORTED CONCENTRATION REPORTED LAB ID STORET METHOD SAMPLE DATE -ANALYSIS DATE XXXXXXXXXXXXXX -0.0050 MG/L 420.2 1186 10/06/92 10/20/92 46000 **EPA** PERMIT LIMIT PERMIT LIMIT -No Limit 0.0020 MG/L TOTAL MERCURY LOADING REPORTED CONCENTRATION REPORTED LAB ID METHOD SAMPLE DATE -ANALYSIS DATE STORET 0.0011 MG/L XXXXXXXXXXXXXX 245.1 1186 10/06/92 10/20/92 71900 **EPA**

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Quarterly Monitoring

_	PHELPS DODGE A00086	MORENCI Name	INC - C		EEK	PERMIT LIMIT	Invnum: 100193 Permit: G-0001-06 ————————————————————————————————————
TOTAL ZINC SAMPLE DATE 10/06/92	— ANALYSIS DATE — 10/20/92		EPA	THOD	— LAB ID —— 1186	Reserved MG/L — CONCENTRATION REPORTED 0.0060 MG/L — PERMIT LIMIT	NO Limit
NITRATE SAMPLE DATE 10/06/92	— ANALYSIS DATE — 10/20/92	STORET	EPA	THOD	— LAB ID —— 1186	10.0000 MG/L — concentration reported — 1.3000 MG/L	No Limit LOADING REPORTED XXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

And

DATE 1/19/93

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Point: A00087 Name: Well CC-14

Permit: G-0001-06

Latitude: 33°3'32.54" Longitude: 109°19'13.72"

Township: 04S Range : 29E Section : 25 Quarter : BCA

Phelps Dodge Morenci, Inc.

Timothy R. Snider, Branch Manager Quarterly Reporting - Monthly Monitoring

P. O. Box 187

Morenci, AZ. 85540

-						PERMIT LIMIT -		PERMIT LIMIT
PH						Reserved	SU	No Limit
SAMPLE DATE -	- ANALYSIS DATE -	- STORET -	ME	THOD	- LAB ID -	CONCENTRATION REF	ORTED -	LOADING REPORTED
10/06/92	10/20/92	00400	EPA	150.1	1186	7.1000	รบ	XXXXXXXXXXXXX
11/02/92	11/20/92	00400	EPA	150.1	1186	7.2000	SU	XXXXXXXXXXXXXX
12/01/92	12/14/92	00400	EPA	150.1	1186	7.4000	SU	XXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
BICARBONATE			*			Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	ETHOD —	— LAB ID —	CONCENTRATION REF	PORTED	LOADING REPORTED
10/06/92	10/20/92	00440	EPA	305.1	1186	108.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00440	EPA	305.1	1186	106.0000	MG/L	XXXXXXXXXXXXX
12/01/92	12/14/92	00440	EPA	305.1	1186	102.0000	MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
TOTAL CALCI	UM					Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	ETHOD	- LAB ID -	CONCENTRATION REP	PORTED	LOADING REPORTED
10/06/92	10/20/92	00916	EPA	215.1	1186	310.0000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00916	EPA	215.1	1186	280.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00916	EPA	215.1	1186	285.0000	MG/L	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Monthly Monitoring Facility: PHELPS DODGE MORENCI INC - CHASE CREEK Invnum: 100193 : A00087 : Well CC-14 Permit: G-0001-06 Point Name

ioine .	1100007	Hame	. ".	00 11				TCIMIC: G. OOOI-OO
TOTAL MAGNE	POTITM					PERMIT LIMIT — Reserved	MC /I	NO Limit
							•	
SAMPLE DATE -			ME	THOD	- LAB ID	CONCENTRATION REPO		LOADING REPORTED
10/06/92	10/20/92	00927	EPA	242.1	1186	62.0000	MG/L	XXXXXXXXXXXXXXXXX
11/02/92	11/20/92	00927	EPA	242.1	1186	64.0000	MG/L	XXXXXXXXXXXXXXX
12/01/92	12/14/92	00927	EPA	242.1	1186	64.0000	MG/L	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
SODIUM					•	Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOD	- LAB ID	CONCENTRATION REPO	ORTED -	LOADING REPORTED
10/06/92	10/20/92	00929	EPA	273.1	1186	47.0000	MG/L	XXXXXXXXXXXXXXX
11/02/92	11/20/92	00929	EPA	273.1	1186	53.0000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00929	EPA	273.1	1186	47.0000	MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT -		PERMIT LIMIT
TOTAL POTAS	SIUM					Reserved	MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOO	— LAB ID	CONCENTRATION REPO	ORTED -	LOADING REPORTED
10/06/92	10/20/92	00937	EPA	258.1	1186	9.8000	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00937	EPA	258.1	1186	10.5000	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00937	EPA	258.1	1186	10.4000	MG/L	XXXXXXXXXXXXXX
				··		PERMIT LIMIT -		PERMIT LIMIT
TOTAL CHLOR	RIDE					Reserved	MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	THOD	- LAB ID	CONCENTRATION REPO	ORTED	LOADING REPORTED
10/06/92	10/20/92	00941	EPA	325.1	1186	293.0000 ³	MG/L	XXXXXXXXXXXXXX
11/02/92	11/20/92	00941	EPA	325.1	1186	(280.0000 j	MG/L	XXXXXXXXXXXXXX
12/01/92	12/14/92	00941	EPA	325.1	1186	_[286.0000]	MG/L	XXXXXXXXXXXXX

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Point: A00087 Name: Well CC-14

Invnum: 100193

Permit: G-0001-06

							101.1110. 0 0001 00
						MG/T	No Limit
ANALYSIS DATE -	STORET -	м	ETHOD	LAB ID		•	LOADING REPORTED
10/20/92	00945	EPA	375.3	1186	(585.0000)		XXXXXXXXXXXXX
11/20/92	00945	EPA	375.3	1186	(585.0000)	•	XXXXXXXXXXXXXXXX
12/14/92	00945	EPA	375.3	1186	560.0000 3	•	XXXXXXXXXXXXXX
•			•		PERMIT LIMIT -		PERMIT LIMIT
					Reserved	MG/L	No Limit
- ANALYSIS DATE -	STORET	мі	ETHOD	- LAB ID -	CONCENTRATION REP	ORTED	LOADING REPORTED
10/20/92	01045	EPA	236.1	1186	-0.0300	MG/L	XXXXXXXXXXXXXX
11/20/92	01045	EPA	236.1	1186	-0.0300	MG/L	XXXXXXXXXXXXX
12/14/92	01045	EPA	236.1	1186	-0.0300	MG/L	XXXXXXXXXXXXXXX
					PERMIT LIMIT -		PERMIT LIMIT -
LVED SOLIDS					Reserved	MG/L	No Limit
- ANALYSIS DATE -	STORET	——— МІ	ETHOD -	- LAB ID	CONCENTRATION REP	ORTED	LOADING REPORTED
10/20/92	70295	EPA	160.1	1186	1560.0000	MG/L	XXXXXXXXXXXXXX
11/20/92	70295	EPA	160.1	1186	1400.0000	MG/L	XXXXXXXXXXXXXX
12/14/92	70295	EPA	160.1	1186	1470.0000	MG/L	XXXXXXXXXXXXXX
	10/20/92 11/20/92 12/14/92 — ANALYSIS DATE — 10/20/92 11/20/92 12/14/92 — ANALYSIS DATE — 10/20/92 11/20/92	10/20/92 00945 11/20/92 00945 12/14/92 00945 — ANALYSIS DATE — STORET — 10/20/92 01045 11/20/92 01045 12/14/92 01045 — ANALYSIS DATE — STORET — 10/20/92 70295 11/20/92 70295	10/20/92 00945 EPA 11/20/92 00945 EPA 12/14/92 00945 EPA 12/14/92 00945 EPA	10/20/92 00945 EPA 375.3 11/20/92 00945 EPA 375.3 12/14/92 00945 EPA 375.3 — ANALYSIS DATE STORET METHOD 10/20/92 01045 EPA 236.1 11/20/92 01045 EPA 236.1 12/14/92 01045 EPA 236.1 12/14/92 01045 EPA 236.1 12/14/92 01045 EPA 160.1 LVED SOLIDS — ANALYSIS DATE STORET METHOD 10/20/92 70295 EPA 160.1 11/20/92 70295 EPA 160.1	10/20/92 00945 EPA 375.3 1186 11/20/92 00945 EPA 375.3 1186 12/14/92 00945 EPA 375.3 1186 — ANALYSIS DATE — STORET — METHOD — LAB ID — 10/20/92 01045 EPA 236.1 1186 11/20/92 01045 EPA 236.1 1186 12/14/92 01045 EPA 236.1 1186 LVED SOLIDS — ANALYSIS DATE — STORET — METHOD — LAB ID — 10/20/92 70295 EPA 160.1 1186 11/20/92 70295 EPA 160.1 1186	ANALYSIS DATE STORET METHOD LAB ID CONCENTRATION REPORT 10/20/92 00945 EPA 375.3 1186 (585.0000) 11/20/92 00945 EPA 375.3 1186 (585.0000) 12/14/92 00945 EPA 375.3 1186 560.0000 permit limit — Reserved ANALYSIS DATE STORET METHOD LAB ID CONCENTRATION REPORT 10/20/92 01045 EPA 236.1 1186 —0.0300 permit limit — PERMIT LIMIT — Reserved 12/14/92 01045 EPA 236.1 1186 —0.0300 permit limit — PERMIT LIMIT — Reserved 12/14/92 01045 EPA 236.1 1186 —0.0300 permit limit — PERMIT LIMIT — Reserved 10/20/92 70295 EPA 160.1 1186 1560.0000 11/20/92 70295 EPA 160.1 1186 1400.0000	Reserved MG/L ANALYSIS DATE STORET METHOD LAB ID CONCENTRATION REPORTED — 10/20/92 00945 EPA 375.3 1186 (585.0000) MG/L 11/20/92 00945 EPA 375.3 1186 (585.0000) MG/L 12/14/92 00945 EPA 375.3 1186 (585.0000) MG/L PERMIT LIMIT RESERVED MG/L ANALYSIS DATE STORET METHOD LAB ID CONCENTRATION REPORTED — 10/20/92 01045 EPA 236.1 1186 -0.0300 MG/L 11/20/92 01045 EPA 236.1 1186 -0.0300 MG/L 12/14/92 01045 EPA 160.1 1186 CONCENTRATION REPORTED — PERMIT LIMIT RESERVED MG/L 10/20/92 70295 EPA 160.1 1186 1560.0000 MG/L 11/20/92 70295 EPA 160.1 1186 1400.0000 MG/L

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Demot A fail

DATE 1/19/93

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

Point : A00087

Name

: Well CC-14

Invnum: 100193

Latitude: 33°3'32.54" Longitude: 109°19'13.72"

Township: 04S

Permit: G-0001-06

Range

: 29E

Section: 25

Quarter : BCA

Phelps Dodge Morenci, Inc.

Timothy R. Snider,

Branch Manager

Quarterly Reporting - Quarterly Monitoring

P. O. Box 187

Morenci, AZ. 85540

TOTAL FLUOR	IDE					PERMIT LIMIT	PERMIT LIMIT ——— No Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET	ME	ETHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	00951	EPA	340.1	1186	0.7600 MG/L	XXXXXXXXXXXXXX
TOTAL ARSEN	T.C		· · · · · · · · · · · · · · · · · · ·			PERMIT LIMIT	
			• .			0.5000 MG/L	No Limit
SAMPLE DATE	- ANALYSIS DATE -	STORET	ME	THOD —	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01002	EPA	206.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXX
	· · · · · · · · · · · · · · · · · · ·					PERMIT LIMIT	PERMIT LIMIT -
TOTAL BARIU	M					1.0000 MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE	STORET	ME	THOD	— LAB ID —	CONCENTRATION REPORTED	
10/06/92	10/20/92	01007	EPA	208.1	1186	-0.1000 MG/L	
-						PERMIT LIMIT	PERMIT LIMIT
TOTAL CADMI	UM					0.0100 MG/L	
SAMPLE DATE	ANALYSIS DATE	STORET	ME	THOD —	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXX
							PERMIT LIMIT
TOTAL CHROM	IUM					0.0500 MG/L	
SAMPLE DATE	- ANALYSIS DATE	STORET -	ME	THOD —	LAB ID	•	
10/06/92	10/20/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXX

SAMPLE DATE -

10/06/92

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Quarterly Monitoring

	PHELPS DODGI A00087	E MORENCI Name		CHASE CR CC-14	EEK	,	Invnum: 100193 Permit: G-0001-06
MOMAT CORDI		·					PERMIT LIMIT
TOTAL COPPE						Reserved MG/L	No Limit
	- ANALYSIS DATE -		•	ETHOD ———	- LAB ID		LOADING REPORTED
10/06/92	10/20/92	01042	EPA	220.1	1186	0.0200 MG/L	XXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT -
TOTAL LEAD						0.0500 MG/L	No Limit
SAMPLE DATE -	- ANALYSIS DATE -	STORET -	H	ETHOD	- LAB ID	CONCENTRATION REPORTED -	LOADING REPORTED
10/06/92	10/20/92	01051	EPA	239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXX
	······································					PERMIT LIMIT	PERMIT LIMIT -
TOTAL MANGA	NESE					Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE -	STORET -	MI	ETH O D	LAB ID		LOADING REPORTED
10/06/92	10/20/92	01055	EPA	243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXX
	· · · · · · · · · · · · · · · · · · ·			<u> </u>		PERMIT LIMIT	PERMIT LIMIT -
TOTAL SILVE	R					0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE -	STORET	MI	ETHOD	- LAB ID -	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01077	EPA	272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL SELEN	IIUM					0.0100 MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE -	STORET -	MI	ЕТНОО	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	01147	EPA	270.2	1186	0.0030 MG/L	XXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT -
TOTAL PHENO	LS	,				Reserved MG/L	No Limit
SAMPLE DATE -	ANALYSIS DATE -	STORET	M	ETHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	46000	EPA	420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL MERCU	RY					0.0020 MG/L	No Limit

LAB ID -

1186

CONCENTRATION REPORTED -

MG/L

0.0005

LOADING REPORTED

XXXXXXXXXXXXX

METHOD :

245.1

EPA

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

STORET

71900

ANALYSIS DATE -

10/20/92

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Quarterly Reporting - Quarterly Monitoring

<u>-</u>	PHELPS DODGE A00087						Invnum: 100193 Permit: G-0001-06
TOTAL ZINC						Reserved MG/	· · · · · · · · · · · · · · · · · · ·
SAMPLE DATE -	ANALYSIS DATE -	STORET -	ME	THOD -	— LÁB ID —	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	82062	EPA	289.1	1186	0.0400 MG/	
NITRATE				• • •		10.0000 MG/	/L No Limit
SAMPLE DATE -	ANALYSIS DATE -	STORET -	ME	THOO	— LAB ID —	CONCENTRATION REPORTED	LOADING REPORTED
10/06/92	10/20/92	00620	EPA	353.2	1186	1.2000 MG/	L XXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Jemot A frie

TABLE 1A

CHASE CREEK MONITOR WELL Monthly Analytical Results (mg/l)

Element	10-06-92	11-02-92	12-01-92
Calcium	410.00	361.00	378.00
Chloride	153.00	146.00	148.00
Iron	0.015	0.015	0.015
Magnesium	66.00	65.00	69.00
pH	7.00	7.00	7.10
Sodium	32.00	34.00	31.00
Sulfate	975.0	930.0	925.0
TDS	1870	1740	1790
Potassium	10.10	10.50	10.70
Bicarbonate	122.00	117.00	121.00

TABLE 1B

CHASE CREEK MONITOR WELL
Monthly Analytical Results (mg/l)

Element	10-06-92	11-02-92	12-01-92
Calcium	280.00	249.00	250.00
Chloride	296.00	308.00	325.00
Iron	0.015	0.015	0.015
Magnesium	61.00	62.00	62.00
рН	7.30	7.30	7.40
Sodium	77.00	87.00	79.00
Sulfate	560.0	510.0	485.0
TDS	1510	1370	1380
Potassium	8.50	9.10	8.80
Bicarbonate	108.00	108.00	96.50

TABLE 1C

CHASE CREEK MONITOR WELL Monthly Analytical Results (mg/l)

Element	10-06-92	11-02-92	12-01-92
Calcium	310.00	280.00	285.00
Chloride	293.00	280.00	286.00
Iron	0.015	0.015	0.015
Magnesium	62.00	64.00	64.00
рН	7.10	7.20	7.40
Sodium	47.00	53.00	47.00
Sulfate	585.0	585.0	560.0
TDS	1560	1400	1470
Potassium	9.80	10.50	10.40
Bicarbonate	108.00	106.00	102.00

TABLE 2A

CHASE CREEK MONITOR WELL Quarterly Analytical Results (mg/l)

Element	10-06-92
Arsenic	.0005
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0010
Nitrate (N)	1.60
Selenium .	.005
Silver	.0050
Fluoride	00.52
Phenols	.0010
Copper	00.01
Manganese	0.005
Zinc	00.0300

TABLE 2B

CHASE CREEK MONITOR WELL Quarterly Analytical Results (mg/l)

Element	10-06-92
Arsenic	.0030
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0011
Nitrate (N)	1.30
Selenium	.003
Silver	.0050
Fluoride	00.56
Phenols	.0010
Copper	00.01
Manganese	0.005
Zinc	00.0060

TABLE 2C

CHASE CREEK MONITOR WELL Quarterly Analytical Results (mg/l)

Element	10-06-92
Arsenic	.0005
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0005
Nitrate (N)	1.20
Selenium	.003
Silver	.0050
Fluoride	00.76
Phenols	.0010
Copper	00.02
Manganese	0.005
Zinc	00.0400

TABLE 3A

CHASE CREEK MONITOR WELL
Five Point Monthly Average (mg/l)

		Well No. CC-	7
Element	J,J,A,S,O, 92	J,A,S,O,N, 92	A,S,O,N,D, 92
Calcium	398.00	390.20	383.80
Chloride	157.40	154.20	152.00
Iron	.015	.015	.015
Magnesium	69.600	67.800	67.600
рН	7.22	7.20	7.22
Sodium	33.000	33.000	32.600
Sulfate	993.0	969.0	952.0
TDS	1891	1860	1836
Potassium	10.58	10.48	10.56
Bicarbonate	119.60	118.60	119.60

TABLE 3B

CHASE CREEK MONITOR WELL
Five Point Monthly Average (mg/l)

		Well No. CC-	8
<u>Element</u>	J,J,A,S,O, 92	J,A,S,O,N, 92	A,S,O,N,D, 92
Calcium	290.00	277.80	269.80
Chloride	292.40	299.00	306.40
Iron	.015	.015	.015
Magnesium	65.400	63.200	62.200
рН	7.46	7.44	7.46
Sodium	75.800	78.600	79.600
Sulfate	609.0	571.0	545.0
TDS	1527	1484	1452
Potassium	8.78	8.80	8.86
Bicarbonate	110.20	109.20	106.50

TABLE 3C

CHASE CREEK MONITOR WELL Five Point Monthly Average (mg/l)

		Well No. CC-1	4
Element	J,J,A,S,O, 92	J,A,S,O,N, 92	A,S,O,N,D, 92
Calcium	307.20	301.20	294.20
Chloride	297.80	292.20	290.00
Iron	.015	.015	.015
Magnesium	65.400	64.200	64.000
рН	7.28	7.28	7.34
Sodium	46.000	47.000	47.000
Sulfate	600.0	597.0	579.0
TDS	1562	1532	1510
Potassium	9.98	9.88	9.96
Bicarbonate	109.00	108.20	107.00

TABLE 4A

CHASE CREEK MONITOR WELL Five Point Quarterly Average (mg/l)

		_	_
		Well No.	CC-7
Element	O,J,A,J,O, 92		
Arsenic	.0005		
Barium	.050		
Cadmium	.0025		
Chromium	.025		
Lead	.0005		
Mercury	.0003		
Nitrate (N)	1.72		
Selenium	.005		
Silver	.0050		
Fluoride	.56		
Phenols	.0036		
Copper	.01		
Manganese	.005		

.0288

Zinc

TABLE 4B

CHASE CREEK MONITOR WELL Five Point Quarterly Average (mg/l)

		Well No.	CC-8
Element	0,J,A,J,O, 92		
Arsenic	.0019		
Barium	.050		
Cadmium	.0025		
Chromium	.025		
Lead	.0005		
Mercury	.0003		
Nitrate (N)	1.44		
Selenium	.003		
Silver	.0050		
Fluoride	.58		
Phenols	.0018		
Copper	.01		
Manganese	.005		,
Zinc	.0071		

TABLE 4C

CHASE CREEK MONITOR WELL Five Point Quarterly Average (mg/l)

		Well No.	CC-14
Element	O,J,A,J,O, 92		
Arsenic	.0005		
Barium	.050		
Cadmium	.0025		
Chromium	.025		
Lead	.0005		
Mercury	.0003		
Nitrate (N)	1.50		
Selenium	.003		,
Silver	.0050		
Fluoride	.77		
Phenols	.0030		
Copper	.02	·	
Manganese	.008	•	
		•	

.0464

Zinc

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

: LEAK DETECT Name

Invnum: 100193

: A00084 Point

PLANT FEED POND Permit: G-0001-06

Latitude: 33°3'40 .35"

Phelps Dodge Morenci, Inc.

Timothy R. Snider, Manager

4521 U.S. Highway 191 Morenci, AZ 85540

Longitude: 109°19'51 - 51"

Township: 045

Range

: 29E

Section: 25

Quarter : BDD

Quarterly Reporting - Weekly Monitoring

BPECIFIC CO	ONDUCTANCE	T STORET	METHOD	LAB 1D +	PERMIT LIMIT — — — — — — — — — — — — — — — — — — —	No Limit LOADING REPORTED XXXXXXXXXXXXXXX
/ /	 	+ -1	⊢ Field		micromhos	XXXXXXXXXXXX
//	 	+ -	├─ - Field		micromhos	XXXXXXXXXXXX
/ /	+ / /	 	├─ Field		micromhos	XXXXXXXXXXXX
11	+ / /	+ -	├─ - Field		micromhos	XXXXXXXXXXXX
/ /	+ / /	- -	Field		micromhos	XXXXXXXXXXXX
//	+ / /	+ -	├─ Field		micrombos	XXXXXXXXXXXX
//	1 / /	-	Field		micromhos	XXXXXXXXXXXX
//	///	 -	Field		m1 cromhos	XXXXXXXXXXXX
	1//	+ -	 Field		micromhos	XXXXXXXXXXXXX

Note: Permit G-0001-06 requires sampling when there are flows of 1 ml/sec.

There were no flows that equaled or exceeded 1 ml/sec.

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY Quarterly Reporting - Weekly Monitoring PHELPS DODGE MORENCI INC - CHASE CREEK

Invnum: 100193

PHELPS DODGE 100084	MORENCI Name	: LEAK DETECT	ER .	DESMIT LIMIT	Permit: G-0001-0
NDUCTANCE	etnest	METHOD	LAB ID - -	10000.0000	No Limit LOADING REPORTED
ANALISIS DATE -	, Jones	Field		micromhos	XXXXXXXXXXXX
11	 -	Field		micromhos	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
ANALYSIS DATE	erroer	#IMD	LAR ID	Reserved	No Limit LOADING REPORTED
- MARTISIS DATE -		Field		SU	XXXXXXXXXXXX
/ /	 -	Field		SU .	XXXXXXXXXXXX
/ /	 -	Field		SU	XXXXXXXXXXXX
/ /	+	Field		SU	XXXXXXXXXXXX
 	+-	Field		SU	XXXXXXXXXXXX
 	 	Field		su	XXXXXXXXXXXX
 	 .	Field		su	XXXXXXXXXXXXX
/ /	 	Field	 - :	su	XXXXXXXXXXXXX
 	 	Field	 	su	XXXXXXXXXXXXX
///	 -	Field	1	su	XXXXXXXXXXXX
//	+	Field		su	XXXXXXXXXXXX
1 / /	 -	Field	 	su	XXXXXXXXXXXX
	DIDUCTANCE ANALYSIS DATE —	Name ONDUCTANCE ANALYSIS DATE — STORET —	NAME : LEAK DETECT NAME : LEAK DETECT NETHOD Field Field ANALYSIS DATE STORET NETHOD Field Field	NETHOD	Name LEAK DETECT

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK

: LEAK DETECT Name

RAFFINATE POND

Invnum: 100193 Permit: G-0001-06

Point : A00084 Latitude: 33°3'48 .66"

Longitude: 109°19'51.08"

Township: 04S Section: 25

: 29E Range

Quarter : BDD

Phelps Dodge Morenci, Inc.

Timothy R. Snider, Manager

4521: U.S. Highway 191 Morenci, AZ 85540

Quarterly Reporting - Weekly Monitoring

NDUCTANCE	STORET	METHOD	LAB ID -	PERNIT LIMIT — TOOOO. OOOO — CONCENTRATION REPORTED — TO	No Limit LOADING REPORTED
, ,		Field		43,400 micromhos	XXXXXXXXXXXX
/ /	-	Field		micromhos	XXXXXXXXXXXX
/ /	-	├─ - Field		micromhos	XXXXXXXXXXXXX
///	 	├─ - Field		micromhos	XXXXXXXXXXXX
 	+ -	├─ - Field		micromhos	XXXXXXXXXXXX
 	+ -	Field		micromhos	XXXXXXXXXXXX
 	-	├─ - Field		micromhos	XXXXXXXXXXXX
/ /	+ -	+ Field		micromhos	XXXXXXXXXXXX
 	+ -	+ Field		micromhos	XXXXXXXXXXXX
''''	+ -	├─ - Field		micromhos	XXXXXXXXXXXX
	NDUCTANCE - ANALYSIS DATE - 11 4 92 / / / / / / / / / / / /	- ANALYSIS DATE - STORET -	- ANALYSIS DATE - STORET - METHOD	- ANALYSIS DATE - STORET - NETHOD - LAB ID - 11 / 4 / 92	NDUCTANCE

Note: Permit G-0001-06 requires sampling when there are flows of 1 ml/sec.

^{*}See page 3 for description of leak detection and repairs.

SELF MONITORING REPORT FORM ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY Quarterly Reporting - Weekly Monitoring

Invnum: 100193 Facility: PHELPS DODGE MORENCI INC - CHASE CREEK Permit: G-0001-06 : LEAK DETECT : A00084 Name Point PERMIT LIMIT -PERMIT LIMIT -No Limit 10000.0000 SPECIFIC CONDUCTANCE LOADING REPORTED -CONCENTRATION REPORTED -- SAMPLE DATE - ANALYSIS DATE - STORET -HETHOD -XXXXXXXXXXXX micromhos Field XXXXXXXXXXXX micromhos Field - PERMIT LIMIT -PERMIT LIMIT -No Limit Reserved PH LOADING REPORTED -CONCENTRATION REPORTED -- SAMPLE DATE - ANALYSIS DATE - STORET -HETHOD XXXXXXXXXXXXX SU Field 11/4/92 * 11 / 4 / 92 1.52 XXXXXXXXXXXX SU Field XXXXXXXXXXXX SU Field XXXXXXXXXXXX SU Field XXXXXXXXXXXXX SU Field XXXXXXXXXXXX SU Field +-XXXXXXXXXXXX SU Field su-+-XXXXXXXXXXXX Field --รบ XXXXXXXXXXXX Field su→ +-XXXXXXXXXXXX Field รบ XXXXXXXXXXXX Field รบ XXXXXXXXXXXX

Field

^{*}See page 3 for description of leak detection and repairs.

Description of Leak Detection and Repairs

A leak of 3.2 ml/sec. was discovered on November 4, 1992 and electrical conductivity and pH measurements were made. The pond was lowered in a stepwise manner and some pinhole ruptures in the liner were located and repaired on November 5th and 6th.

A leak of less than 1 ml/sec. was discovered on November 11, 1992. Three small cracks in the liner were found and repaired. There have been no leaks since that repair.

I CERTIFY UNDER PENALTY OF LAW THAT I NAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIR OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELEIVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

cur 1 for DATE 1/19/93

A.	WELL IDENTIFIER (name,	location, or num	ber) CC-7	Date Sampled: /0-6-92
		2000020, 02		
B.	FIELD MEASUREMENTS	i\ 1/9	97 (foot b	alow land curface)
	Depth to Water (prior Land Elevation at Well	to purging): ////	10001): 35	elow land surface)
	Equipment Used to Meas	(Teet above sea	500/ Steel	Chain (Wetted
	Tape Method)	are water hever.	300 BCEET	
	Water Temp. (°C): 22.1	pH (std. units):	6.77 Other	*•
	Electrical Conducti			
c.	SAMPLING METHODS			
	Well Purging Performed			
	Purging Equipment: <u>De</u>	dicated Pump		
	Purge Time (hrsmin.)	: <u>22 min</u> Pu	mping Rate	(gpm) 12
•	Sample Collection Equi	pment:W	ell Volumes	Removed: 3
	Bailer (type):_			nedia-teda Von
	X Pump (type):	Submersible		Dedicated? Yes
•	Other (type): If a Pump was Used, a	that Bankh Bal	the Water	Surface was the
	II a Pump was used, a	t what bebth ber	ow the wate.	Surface was the
	Pump Intake Set?:	t (well bead wat	or tank et	c). Well Head
	pambie collection both	c (well nead, wat	er cam, cc	o.,. <u> </u>
D.	EQUIPMENT DECONTAMINAT	TON		
	Briefly Describe Equip		ion Procedu	res:
	Water Level Measure	ment Equipment:	Wiping with	Disposable Towel
	Purging Equipment:_	Dedicated Pump		
			·	
	Sample Collection E	quipment: <u>Equipm</u>	ent Cleaned	with Purge Water
	· · · · · · · · · · · · · · · · · · ·			
_				
E.	CONTAINERIZATION AND P	RESERVATION		
	WATER	PRESERVATI	ON	CONTAINER
(OUALITY PARAMETER	METHOD	 .	TYPE/SIZE
	ZOTILLI TIMUMILLIM	(All Stored a	t 4°C)	
Gen	eral Mineral/Physical	No Additives	,	1,000 ML Plastic
	al Metals	HNO3 to <2 pH*		500 ML Plastic
	rate/Nitrite	H2SO4 to <2 pH*		50 ML Plastic
	nols	H3PO4 + CuSO4 S		100 ML Glass
	ld Filtering: Yes			
	Filtering Apparatus: P		<u>e Filters</u>	
	Filter Mesh Size: <u>0.45</u>	Micron	••	
Cha	in-of-Custody Procedure	s Followed: Yes_	мо	

^{*}All bottles furnished by BC Laboratories Inc. with preservative added.

			Date
A.	WELL IDENTIFIER (name,	location, or number) <u>CC-8</u>	Sampled: 10-6-92
в.	FIELD MEASUREMENTS	•	
		to purging): 157.81 (feet	below land surface)
	Land Elevation at Well	(feet above sea level): 3	621.52 (M.P.)
	Equipment Used to Meas	ure Water Level: 500' Stee	l Chain (Wetted
	Tape Method)		
		pH (std. units): 702 Oth	er:
		vity (umhos/cm @ 25°C): // 92	
c.	SAMPLING METHODS		•
•		: Yes: X No:	6
	Purging Equipment: De		
	Purge Time (hrsmin.)	: 27 min Pumping Rate	(gpm) 10
	Sample Collection Equi	pment:Well Volume	s Removed: 3
	Bailer (type):	<u> </u>	
	X Pump (type):	Submersible	Dedicated? Yes
	Other (type):		
	If a Pump was Used, a	t What Depth Below the Wat	er Surface was the
	Pump Intake Set?:	143 Feet	
		t (well head, water tank, e	tc.): Well Head
	•		
D.	EQUIPMENT DECONTAMINAT	ION	
		ment Decontamination Proced	ures:
	Water Level Measure	ment Equipment: Wiping wit	h Disposable Towel
	Purging Equipment:_	Dedicated Pump Placed on P	VC Pump Column
	Sample Collection E	quipment: <u>Equipment Cleane</u>	d with Purge Water
E.	CONTAINERIZATION AND P	RESERVATION	
	WATER	PRESERVATION	CONTAINER
	QUALITY PARAMETER	METHOD	TYPE/SIZE
	OURDITT FARAMETER	(All Stored at 4°C)	
Gen	eral Mineral/Physical	No Additives	1,000 ML Plastic
	al Metals	HNO3 to <2 pH*	500 ML Plastic
		H2SO4 to <2 pH*	50 ML Plastic
	rate/Nitrite	H3PO4 + CuSO4 Solution*	100 ML Glass
Pne	nols	H3PO4 + CuSO4 Solucion-	
T7 4 -	ld Milhamines, Vos	(Vec No N/A)	•
	ld Filtering: Yes		
		ressure Disposable Filters	
0 4 -	Filter Mesh Size: 0.45	MICTON Vos V	•
cna	in-of-Custody Procedure	s Followed: Yes X No_	

*All bottles furnished by BC Laboratories Inc. with preservative added.

	•				Date
A.	WELL IDENTIFIER (name,	, location,	or number)_	CC-14	
B.	FIELD MEASUREMENTS Depth to Water (prior Land Elevation at Well Equipment Used to Meas Tape Method) Water Temp. (°C): 23.7 Electrical Conducts	l (feet abo sure Water _ pH (std.	ve sea level Level: 500' units): 6.92): <u>360</u> Steel _ Other	8.39 (M.P.) Chain (Wetted
c.	SAMPLING METHODS Well Purging Performed Purging Equipment: De Purge Time (hrsmin.) Sample Collection Equipment: De Purge Time (type): Type): De Pump (type): De Pump Was Used, and De Pump Was Use	edicated Pu : 22 mu ipment: Submersib	mp <u>ules</u> Pumping Well V	Rate (Removed: 3edicated? Yes
	Pump Intake Set?: Sample Collection Poin	143 reet	_		
D.	EQUIPMENT DECONTAMINATE Briefly Describe Equipment: Water Level Measure Purging Equipment:	oment Decon ement Equip Dedicated	ment: Wipin Pump on PV	column	Disposable Towel
	Sample Collection 1 from Well	Equipment:_	Equipment C	Leaned	with Purge water
E.	CONTAINERIZATION AND	PRESERVATIO	N		
	WATER DUALITY PARAMETER	-	SERVATION METHOD red at 4°C)	· ·	CONTAINER TYPE/SIZE
Gen	eral Mineral/Physical	No Addit			1,000 ML Plastic
	al Metals	HNO3 to			500 ML Plastic
	rate/Nitrite	H2S04 to			50 ML Plastic
Phe	nols	<u> H3PO4 +</u>	<u>CuSO4 Soluti</u>	.on*	100 ML Glass
.]	ld Filtering: <u>Yes</u> Filtering Apparatus: <u> </u> Filter Mesh Size: <u> </u>	Pressure Di 5 Micron	sposable Fil		

^{*}All bottles furnished by BC Laboratories Inc. with preservative added.

				Date
A.	WELL IDENTIFIER (name,	location, or nu	mber) <u>CC-7</u>	Sampled: -2-72
B.	PIELD MEASUREMENTS Depth to Water (prior than the Land Elevation at Well Equipment Used to Measure Tape Method) Water Temp. (°C): 22.1 Electrical Conductive	(feet above seaure Water Level: pH (std. units)	level): 35 500' Steel : 6.84 Othe	61.61 (M.P.) Chain (Wetted
C.	Well Purging Performed Purging Equipment: Dec Purge Time (hrsmin.) Sample Collection Equipment	dicated Pump : <u>23 m, v </u>	umping Rate Well Volumes	
	Baller (type): X Pump (type): Other (type): If a Pump was Used, a Pump Intake Set?: Sample Collection Point	Submersible t What Depth Be	low the Wate	r Surface was the
D.	EQUIPMENT DECONTAMINATE Briefly Describe Equipment: Water Level Measure Purging Equipment:	ment Decontamina ment Equipment:_	Wiping with	res: Disposable Towel
	Sample Collection E	quipment: Equip	ment Cleaned	with Purge Water
E.	CONTAINERIZATION AND P	RESERVATION		
	WATER OUALITY PARAMETER	PRESERVAT METHOL		CONTAINER TYPE/SIZE
Tot Nit	neral Mineral/Physical al Metals arate/Nitrite enols	(All Stored No Additives HNO3 to <2 pH H2SO4 to <2 pH H3PO4 + CuSO4	[*	1,000 ML Plastic 500 ML Plastic 50 ML Plastic 100 ML Glass
	eld Filtering: Yes Filtering Apparatus: P Filter Mesh Size: 0.45 Ain-of-Custody Procedure	Micron	ole Filters -	

*All bottles furnished by BC Laboratories Inc. with preservative added.

			•	Date
A. WELL IDENTIFI	ER (name,	location, or num	ber) <u>CC-8</u>	Sampled: 11-2-92
B. FIELD MEASURE	MENTE			
Denth to Water	r (prior t	o purging):/58.	79 (feet b	elow land surface)
Tand Flevation	n at Wall	(feet above sea	level): 36	21.52 (M.P.)
Equipment Use	y to Mosen	re Water Level:_	500' Steel	Chain (Wetted
Tape Method)	1 CO Measu	Te waret peaer.	<u> </u>	0.10.2.1. (11.00.00.00.
Water Temp (*)	21 . 27.0	nH (etd units):	708 Other	r:
Flectrical	Conductiv	ity (umbos/cm A	25°C): 1.86	0
Piecei icai	Conductiv	rey (diminos) em e	25 0/ 1//	
C. SAMPLING METH	ods			,
		Yes: <u>X</u> No:	,	
Purging Equip	ment: Ded	icated Pump		
Purge Time (h	rsmin.):	26 min Pu	mping Rate	(gpm) 10
Sample Collec	tion Equip	ment:W	ell Volumes	Removed: 3
Railer	(type):			
X Pump	(type):	Submersible		Dedicated? <u>Yes</u>
Other	(type):			·
If a Pump was	s Used, at	What Depth Bel	ow the Wate	r Surface was the
Pump Intak	e Set?: 1	43 Feet		
Sample Collect	tion Point	(well head, wat	er tank, et	c.): Well Head
· -		•		
D. EQUIPMENT DEC	ONTAMINATI	ON	2	
Briefly Descr.	ibe Equipm	ent Decontaminat	ion Procedu	res:
Water Leve	l Measurem	ent Equipment:	Wiping with	Disposable Towel
	•	,		
Purging Eq	uipment:	Dedicated Pump P	laced on PV	C Pump Column
Sample Col	lection Eq	uipment: <u>Equipm</u>	<u>ent Cleaned</u>	with Purge Water
				
E. CONTAINERIZAT	TON THE DE	POEDVAMION		·
E. CONTAINERIZAT	TON AND PR	ESERVALION		
WATER		PRESERVATI	ON	CONTAINER
OUALITY PARAME	משת	METHOD	.041	TYPE/SIZE
OUABITE PARAME	IER	(All Stored at	4°C)	
General Mineral/P	hyaiaal	No Additives	4 0)	1,000 ML Plastic
	HYSICAL	HNO3 to <2 pH*		500 ML Plastic
Total Metals	······································			50 ML Plastic
Nitrate/Nitrite		<u>H2SO4 to <2 pH*</u> H3PO4 + CuSO4 S		100 ML Glass
Phenols		H3P04 + CuS04 S	SOTUCION*	100 ML Glass
				· · · · · · · · · · · · · · · · · · ·
mi.la milkamina.	W	(Vec No M/A)		
Field Filtering:_	<u>res</u>	_(les, No, N/A)	o Filtors	
riltering Appa	ratus: Pr	essure Disposabl	e riiters	
Filter Mesh Si	ze: <u>0.45</u>	MICCON Var	V Ma	
Chain-of-Custody	rroceaures	P. LOTTOMEG: Jes-	<u>X</u> No	
			• •	
*All bottles furn	ished by F	BC Laboratories I	.nc. with pr	eservative added.

A.	WELL IDENTIFIER (name	. location.	or number)	CC-14	Date Sampled: //-02-92
		,,	•		
B.	FIELD MEASUREMENTS Depth to Water (prior Land Elevation at Well Equipment Used to Measurement Used to Mea	l (feet abov	e sea leve	1): 360	08.39 (M.P.)
	Tape Method)				
	Water Temp. (°C): 23.7 Electrical Conduct	_ pH (std. u ivity (umhos	/cm @ 25°C): <u>/,83</u>	خ.
c.	SAMPLING METHODS Well Purging Performed Purging Equipment: De Purge Time (hrsmin. Sample Collection Equipment: Equipment (type):	edicated Pum): <u>23 minu</u> ipment:	p Pumpin Well	g Rate (Volumes	(gpm) 10 Removed: 3
	Bailer (type): X Pump (type): Other (type):	Submersibl	е		edicated? <u>Yes</u>
	Other (type): If a Pump was Used, Pump Intake Set?: Sample Collection Point	143 Feet			
D.	EQUIPMENT DECONTAMINA Briefly Describe Equipment: Water Level Measure Purging Equipment: Sample Collection	pment Decont ement Equipm Dedicated	ent: <u>Wipi</u> Pump on PV	ng with	Disposable Towel
	from Well				
E.	CONTAINERIZATION AND	PRESERVATION	•		
	WATER OUALITY PARAMETER	M	ERVATION ETHOD		CONTAINER TYPE/SIZE
Tot Nit	eral Mineral/Physical al Metals rate/Nitrite nols	No Additi HNO3 to < H2SO4 to	2 pH*		1.000 ML Plastic 500 ML Plastic 50 ML Plastic 100 ML Glass
	ld Filtering: <u>Yes</u> Filtering Apparatus: Filter Mesh Size: <u>0.4</u> in-of-Custody Procedur	Pressure Dis 5 Micron	posable Fi		· · · · · · · · · · · · · · · · · · ·
*Al	l bottles furnished by	BC Laborato	ries Inc.	with pre	eservative added.

					Date
A.	WELL IDENTIFIER (name,	location,	or number		<u>Sampled: 2- -92</u>
В.	FIELD MEASUREMENTS Depth to Water (prior Land Elevation at Well Equipment Used to Meas Tape Method) Water Temp. (°C): 22,0 Electrical Conducti	(feet abovure Water I	e sea leve evel: 500 nits): 68	el): <u>356</u> 0'Steel 7_ Other	Chain (Wetted
c.	SAMPLING METHODS Well Purging Performed Purging Equipment: De Purge Time (hrsmin.) Sample Collection Equipment: De Purge Time (type): De Pump (type): De Pump Was Used, and Pump Intake Set?: Sample Collection Point	dicated Pum : 27 min pment: Submersible at What Dep 143 Feet	Pumping Well e th Below	ng Rate Volumes I the Wate	Dedicated? Yes r Surface was the
D.	EQUIPMENT DECONTAMINAT Briefly Describe Equip Water Level Measure Purging Equipment: Sample Collection E	ment Decont ment Equipm Dedicated	ent: Wip	ing with	Disposable Towel
E.	CONTAINERIZATION AND F	RESERVATION	ı		
	WATER OUALITY PARAMETER eral Mineral/Physical	(All St No Additi			CONTAINER TYPE/SIZE 1,000 ML Plastic
			(2 pH*	500 ML Plastic	
	rate/Nitrite	<u>H2SO4 to</u>			50 ML Plastic
<u>Phe</u>	nols	<u> H3PO4 + C</u>	CuSO4 Solu	tion*	100 ML Glass
	ld Filtering: Yes Filtering Apparatus: Filter Mesh Size: 0.45 in-of-Custody Procedure	Pressure Dis Micron	sposable F		

^{*}All bottles furnished by BC Laboratories Inc. with preservative added.

					Date	
A.	WELL IDENTIFIER (name,	location,	or number	cc-8	Sampled:	12-1-92
в.	FIELD MEASUREMENTS	•				
٠.	Depth to Water (prior	to nurging	1. 159.94	/ (feet b	elow land	surface)
	Land Elevation at Well	(feet abo	ve sea les	(1000 2	21 52 (M P	Jarrace
	Equipment Used to Meas	ure Water	ve sed lev	01).	Chain (We	tted
	Tape Method)	die water	pever. 70	o oceen	. Chain (we	<u>cceu</u>
	Water Temp.(°C): <u>27./</u>	nu /std	unitel · 7	// Othe	7.	
	Electrical Conducti	_pn (scu. .vitv (umbo	aliics)//	C) . 1.84	70	
	Electical conducti	.vicy (uniiio	5/Cm e 25	C) •		
c.	SAMPLING METHODS					
•	Well Purging Performed	l: Ves: X	No:			
	Purging Equipment: De					
	Purge Time (hrsmin.)	· 2/ mu	/ Pumni	ng Rate	(apm)	10
	Sample Collection Equi	nment.	Well	Volumes	Removed:	3
	Bailer (type):					
	X Pump (type):	Submersib	10		Dedicated?	Yes
	Other (type):_	Dabmersi	<u> </u>		.bearoacea.	
	If a Pump was Used, a	t What Der	th Below	the Wate	er Surface	was the
	Pump Intake Set?:	195 Feet	CII DCTOW	ciic was	Jan Darrace	
	Sample Collection Poin	t /well he	- ad water	tank et	c) · Well	Head
	Dampie Collection 1011	ic (well iic	aa, wacci	came, co		
D.	EQUIPMENT DECONTAMINAT	TON				
٠.	Briefly Describe Equip		tamination	Procedu	reci	
	Water Level Measure	ment Fallin	ment. Wir	ing with	Dienoeahl	e Towel
	water bever headure	mene nquip		7111 <u>9 #101</u>	DIDDODGAL	<u> </u>
	Purging Equipment:	Dedicated	Pump Plac	ed on PV	C Pump Col	umn
	Sample Collection E	Equipment:	Equipment	Cleaned	with Purg	e Water
E.	CONTAINERIZATION AND E	RESERVATIO	N			
	WATER	PRE	SERVATION		CONTA	INER
	QUALITY PARAMETER		METHOD		TYPE/	SIZE
		(All Sto	red at 4°C	2)		
Gene	eral Mineral/Physical	<u>No Addit</u>	ives	•	1,000 ML	Plastic
	al Metals	HNO3 to				Plastic
	rate/Nitrite	H2SO4 to <2 pH*				Plastic
Phenols			H3PO4 + CuSO4 Solution*		100 ML	
11101		1151 04 .	CUDO T DOIL			<u> </u>
		-				
Fie:	ld Filtering: Yes	(Yes. No	. N/A)	4		
	Filtering Apparatus: F			ilters		
	Filter Mesh Size: 0.45					
	in-of-Custody Procedure		: Yes X	No		
	· ·		·		•	

^{*}All bottles furnished by BC Laboratories Inc. with preservative added.

WELL IDENTIFIER (name,	location, or number) <u>CC-1</u>	4 Sampled: 12-1-92
•		
Equipment Used to Meas		
Water Temp. (°C): 23.5	pH (std. units): <u>7.08</u> Oth vity (umhos/cm @ 25°C): //8	er:
Purging Equipment: De	dicated Pump	(qpm) 10
Bailer (type):_		
Other (type):	·	
Pump Intake Set?:	185 Feet	
Briefly Describe Equip	ment Decontamination Proced	
Purging Equipment:_	Dedicated Pump on PV Colum	n
Sample Collection E	quipment: Equipment Cleane	d with Purge Water
CONTAINERIZATION AND P	RESERVATION	
WATER DUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	No Additives	1,000 ML Plastic
		500 ML Plastic
- · · · · · · · · · · · · · · · · · · ·	——————————————————————————————————————	<u>50 ML Plastic</u>
ols	H3PO4 + CuSO4 Solution*	_ 100 ML Glass
Filtering Apparatus: P	ressure Disposable Filters	
	<u>Micron</u> s Followed: Yes X No	
	Depth to Water (prior Land Elevation at Well Equipment Used to Meas Tape Method) Water Temp. (°C): 23.5 Electrical Conducti SAMPLING METHODS Well Purging Performed Purging Equipment: De Purge Time (hrsmin.) Sample Collection Equi Bailer (type): Yellow [type]: Other (type): Other (type): Sample Collection Poin EQUIPMENT DECONTAMINAT Briefly Describe Equip Water Level Measure Purging Equipment: Sample Collection E from Well CONTAINERIZATION AND PURCONTAINERIZATION AND PURCONTAINERIZATIO	Depth to Water (prior to purging): (feet Land Elevation at Well (feet above sea level): _3 Equipment Used to Measure Water Level: _500' Steet Tape Method) Water Temp. (°C): _23.5 pH (std. units): _7.08 Oth Electrical Conductivity (umhos/cm @ 25°C): _/.8 SAMPLING METHODS Well Purging Performed: Yes: _X No: Purging Equipment: _Dedicated Pump Purge Time (hrsmin.): _3/ mr./ Pumping Rate Sample Collection Equipment: Well Volume Bailer (type):

*All bottles furnished by BC Laboratories Inc. with preservative added.